REMARKS

Applicants respectfully request reconsideration. Claims 1-9 were previously pending in this application. Claims 1 and 5 were amended. No claims were canceled or added. As a result, claims 1-9 are pending for examination with claims 1 and 5 being independent claims. No new matter has been added.

Rejections under 35 U.S.C. §112

The Office Action rejected claims 1-9 under 35 U.S.C. §112 as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains to make and/or use the invention.

i) Specifically, the Office Action asserts that the specification and the claims fail to teach how "compatibility" of the polarizing eyeglass with a "plurality of stereoscopic image display apparatus" is achieved. Applicants disagree.

Although the amended claims no longer refer to compatibility, Applicants note that the specification does teach how "compatibility" of the polarizing eyeglass with a "plurality of stereoscopic image display apparatus" is achieved.

For example, the specification teaches how a polarizing eyeglass device 1 can be used in a number of service conditions (FIG. 6-9) so as to ensure compatibility of the polarizing eyeglass device 1 with a number of types of stereoscopic image display apparatus (i.e., type I, II, III, IV). The type of stereoscopic image display apparatus can have a polarizing plate in different directions, and as such comprise a plurality of stereoscopic image display apparatus. For example, type I and II stereoscopic image display apparatus have a polarizing plate with a polarization angle orthogonal to the polarization angle of the polarizing plate of the type III and IV stereoscopic image display apparatus.

Similarly, the specification also teaches how a polarizing eyeglass device 1B can be used in a number of service conditions (FIG. 22-25) so as to ensure compatibility of the polarizing eyeglass device 1B with a number of types of stereoscopic image display apparatus (i.e., type I, II, III, IV).

ii) The Office Action also asserts that the specification and the claims fail to provide the essential relationship concerning the polarization states of the image light for the right eye and the left eye image with respect to the polarization property of the phase difference plate, the polarization property of the polarized light separation means, and the polarization rotation properties of the first and second polarization direction changing means so that the left eye image will only reach the left eye, and the right eye image will only reach the right eye. Applicant disagrees.

For example, for a stereoscopic image display apparatus 40 of type IV viewed with polarizing eyeglass device in service condition A, the specification describes the operation of the polarizing eyeglass device in the description of FIG. 10 (specification page 32, line 9 – page 43, line 14).

The specification teaches that the left eye El cannot view the right eye Er images because of the orthogonal polarization conditions of the polarizing plate 44 and the polarized light separation means 2. In contrast, the left eye images L can be viewed by the left eye El. This is because the polarization direction of the polarized light emitted from the second areas 43b through the polarizing plate 44 is changed by 90° by the first polarization direction changing means 5 interposed between the polarizing plate 44 and the polarized light separation means 2 which have polarization angles orthogonal to each other (specification page 32, line 21 – pages 33, line 23).

The specification also teaches that the right eye Er of the viewer who looks through the polarized light separation means 2 cannot view the left eye images L because the polarization angles of the polarizing plate 44 and the polarized light separation means 2 are orthogonal to each other. In contrast, the right eye Er can view the right eye images R. This is because, even if the polarization direction of the polarized light is changed by 90° by the second polarization direction changing means 6 positioned on the side facing the viewer, the polarization direction of the polarized light emitted from the second areas 43b through the polarizing plate 44 is changed by 90° by the phase difference plates 45 interposed between the polarizing plate 44 and the polarized light separation means 2 which have polarization angles orthogonal to each other (specification page 33, line 24 – page 34, line 14).

For the sake of forwarding prosecution, Applicants have amended claims 1 and 5 so as to recite the polarization attributes of various elements. It should be understood that Applicants are not including these amendments to distinguish over any prior art, but rather to aid in the clarification of the claims.

iii) The Office Action also asserts that the specification fails to teach how the stereoscopic image can still be viewed when the first and second polarization changing means are reversed in order or position, and assert that this will only be possible if the image format displayed in the screen is also changed.

Applicant disagrees that the specification fails to teach how a stereoscopic image can still be viewed when the first and second polarization changing means are reversed in order or position. For example, in one embodiment, the specification teaches how a polarizing eyeglass device 1 can be used in a number of service conditions (FIG. 6-9) so as to ensure compatibility of the polarizing eyeglass device with a number of types of stereoscopic image display apparatus (i.e., type I, II, III, IV). When the type of the stereoscopic image display apparatus is modified, the polarizing eyeglass may be placed in a service condition (i.e., an arrangement) which is compatible with the type of the stereoscopic image display apparatus. As such, the reversing of the first and second polarization changing means enables one to place the polarizing eyeglass in a service condition that is compatible (i.e., workable) with a given type of the stereoscopic image display apparatus.

The illustrative embodiments above (in sections i-iii) are merely provided to assist the Examiner in appreciating various aspects of applications for embodiments of the present invention. However, all of the discussion above does not apply to each of the independent claims, and the language of the independent claims may differ in material respects from the discussion provided above. Thus, the Examiner is respectfully requested to give careful consideration to the language of each of the independent claims and to address each on its own merits, without relying on the summary provided above. In this respect, Applicants do not rely on the summary provided above to distinguish any of the claims of the present application over the prior art, but rather, rely only upon the arguments presented below relating to each specific independent claim.

Claim Objections

i) The Office Action asserts that claims 1 and 5 recite a "second polarization direction changing means adhered to a second face opposite to the first face of the polarized light separation means" which the Office Action asserts is unworkable. Applicants respectfully disagree.

The second polarization direction changing means adhered to a second face opposite to the first face of the polarized light separation means does serve a function, even though it may not affect the polarized light passing through. The first and second polarization direction changing means allow for compatibility of the eyeglass device with different types of stereoscopic image display apparatus (page 34, lines 15-18 and page 57, lines 7-10). Specifically, via the choice of the eyeglass device service condition, the eyeglass device may be compatible with different types of stereoscopic image display apparatus (FIG. 11 and 27). Hence, not only is the proposed eyeglass device with the second polarization direction changing means workable, but the second polarization direction changing means enables the compatibility of the eyeglass device with different types of stereoscopic image displays.

ii) The Office Action asserted that the phrase "in an opposing relationship" recited in claims 1 and 5 is confusing since it is not clear what is opposed here. For clarification purposes, Applicants have amended claims 1 and 5 and replaced "in an opposing relationship" with "in front of."

Rejections Under 35 U.S.C. §103

The Office Action rejected claims 1, 3-4, 5 and 7-9 under 35 U.S.C. §103(a) as being unpatentable over PCT publication WO 95/00872 ("Rosencwaig"). Applicants respectfully disagree.

Rosencwaig teaches a stereoscopic vision system including a pair of glasses positioned over the viewer's eyes including two lenses 140 and 146 (Fig. 4). The first lens 140 consists of a birefringent retarder 142 that rotates the polarization of light striking the lens by -90°. The retarder is followed by a linearizing polarizer 144 orientated at 90° relative to the display

polarizer. The second lens 146 includes only a linearizing polarizer 148 that is also orientated 90° relative to the display polarizer (page 7, lines 14-23). Rosencwaig is completely silent as to a second polarization direction changing means adhered to a second face opposite to the first face of said polarized light separation means.

The Office Action purports that the claims fail to provide the logical relationship as to how the second polarization direction changing means cooperates with the other elements in the claims to make the device operable. Furthermore, the Office Action asserts that since the second polarization direction changing means does not supposedly affect the operation of the polarizing eyeglasses in the viewing of the stereoscopic vision, it would have been an obvious matter of design choice to add an additional optical element that does not effect the function. Applicant respectfully disagrees.

The second polarization direction changing means, as recited in claims 1 and 5, allows the polarizing eyeglass device to be adaptable for use in an arrangement wherein the polarized light separation means has a polarization angle orthogonal to the polarization angle of the polarizing plate of a plurality of stereoscopic image display apparatus. In particular, the second polarization direction changing means allows the polarizing eyeglass device to be used with a plurality of stereoscopic image display apparatus having a polarizing plate with a polarization angle along a first direction OR a direction orthogonal to the first direction. As such, the second polarization direction changing means is not a matter of design choice, and if removed will result in the inability to adapt the polarizing eyeglass device to an arrangement wherein the polarized light separation means has a polarization angle orthogonal to the polarization angle of the polarizing plate of the plurality of stereoscopic image display apparatus.

Rosencwaig is silent as to a polarizing eyeglass device having a second polarization direction changing means adhered to a second face opposite to the first face of said polarized light separation means in the second viewing region, as recited in amended claim 1. Therefore, for at least this reason, claim 1 and 5 patentably distinguishes over Rosencwaig and are in allowable condition.

Claims 2-4 depend from claim 1 and are allowable for at least the same reason

Claims 6-9 depend from claim 1 and are allowable for at least the same reason.

Accordingly, withdrawal of this rejection is respectfully requested.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

Applicants respectfully note that if the reasoning pertaining to the purpose and functioning of the second polarization direction changing is not clear, the Examiner is encouraged to contact the undersigned at the telephone number listed below. Applicants would be grateful to the Examiner for such an opportunity to discuss the detailed functioning of the eyeglass device via a more conducive medium, and would like to thank the Examiner in advance for his time and consideration.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
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